

*EPM*

ENVIRONMENTAL PROJECT MANAGEMENT, LLC

6602 Montclair Ln., Madison, WI 53711  
608.277.0575

February 20, 2013

Mr. Andrew Rackers  
Hazardous Waste Program, Permits Section  
Missouri Dept. of Natural Resources  
P.O. Box 176  
Jefferson City, MO 65102-0176

RECEIVED

MAR 06 2013

AWMD/WRAP-MIRP

RE: Progress Report  
Univar USA Inc., Expedited Corrective Action Program,  
St. Louis (Berkeley), Missouri. EPA ID# MOD084396985

Dear Mr. Rackers:

On behalf of Univar USA Inc. (Univar), Environmental Project Management is providing the Missouri Department of Natural Resources (MDNR) with two copies of the progress report for the above-identified Expedited Corrective Action Program (ECAP) project. This report covers 2012 and describes the completed activities, findings, and the planned future activities. A Final ECAP Report for this project was previously submitted to the MDNR in August 2009, while a Corrective Measures Study Report was submitted to the MDNR in July 2010.

#### Completed Activities

The activities completed over the reporting period for the Univar ECAP St. Louis project consisted of the following:

- Submittal of the Progress Report to the MNDR for the second half of 2011.
- Completed field activities associated with semi-annual groundwater sampling events in 2012.
- Evaluated the data generated from the field activities and prepared this report.

#### Findings

The field activities for this project were completed on June 21, 2012, and December 20, 2012, and consisted of collecting a groundwater sample from each of the facility monitoring wells. The sampling activities were completed consistent with the scope of work and the Quality Assurance Project Plan (QAPP) prepared for this ECAP project. Prior to sampling, the water level in each monitoring well was measured. The water level measurements for each well and the water level elevations are presented in Table 1. A water table contour map utilizing the water level data from Table 1 is presented in Figures 1 (June data) and 2 (December data). The configuration of the water table and the direction of groundwater flow shown in Figures 1 and 2 are consistent with previous data and observations.

The analytical data from these sampling events, and all past ECAP sampling events at this facility, are summarized in Table 2. The complete laboratory reports from the groundwater sampling rounds are provided in Attachment 1. In addition, the concentration of the total volatile organic compounds (VOCs) for each groundwater sample are also included in Figures 1 and 2,

RCRA



which illustrates the approximate distribution of VOCs in the groundwater across the facility. The water sampling logs summarizing the field data collected during the groundwater sampling events are provided in Attachment 2.

The data from the most recent groundwater sampling events shown in Table 2 are consistent with previous data from the facility monitoring wells. Each of the monitoring well locations generally produced samples that decreased in total VOC concentration, relative to recent historical data, or remained at level similar to recent data, with long-term downward trends present. Two monitoring well locations continue to produce non-detectable concentrations (Monitoring Wells MW-1 and MW-5). Monitoring Well MW-8 produced the lowest concentration ever detected at that location in December.

The data from the quality assurance/quality control (QA/QC) samples collected during the sampling events are included in Table 2. The trip blank and field equipment blank samples from the 2012 groundwater sampling events did not contain any reported detections. A groundwater sample collected from Monitoring Well MW-9 was also submitted to the laboratory as a blind duplicate sample during both the June and December sampling events. The duplicated samples produced relatively similar results (within 6% to 10% of the original sample), suggesting good laboratory reproduction.

The overall groundwater analytical data from this facility generally shows a downward concentration trend over time due to natural degradation and attenuation processes. The ECAP investigation activities completed at this facility have demonstrated that soil and groundwater environmental impacts are relatively limited.

#### Future Activities

The future activities recommended for this facility include ongoing semi-annual groundwater sampling and analysis. Univar will continue to submit periodic update reports summarizing the data.

Please do not hesitate to contact Tony Pirelli of Univar at 262-250-1381, or myself at 608-277-0575, should you have any questions.

Sincerely,



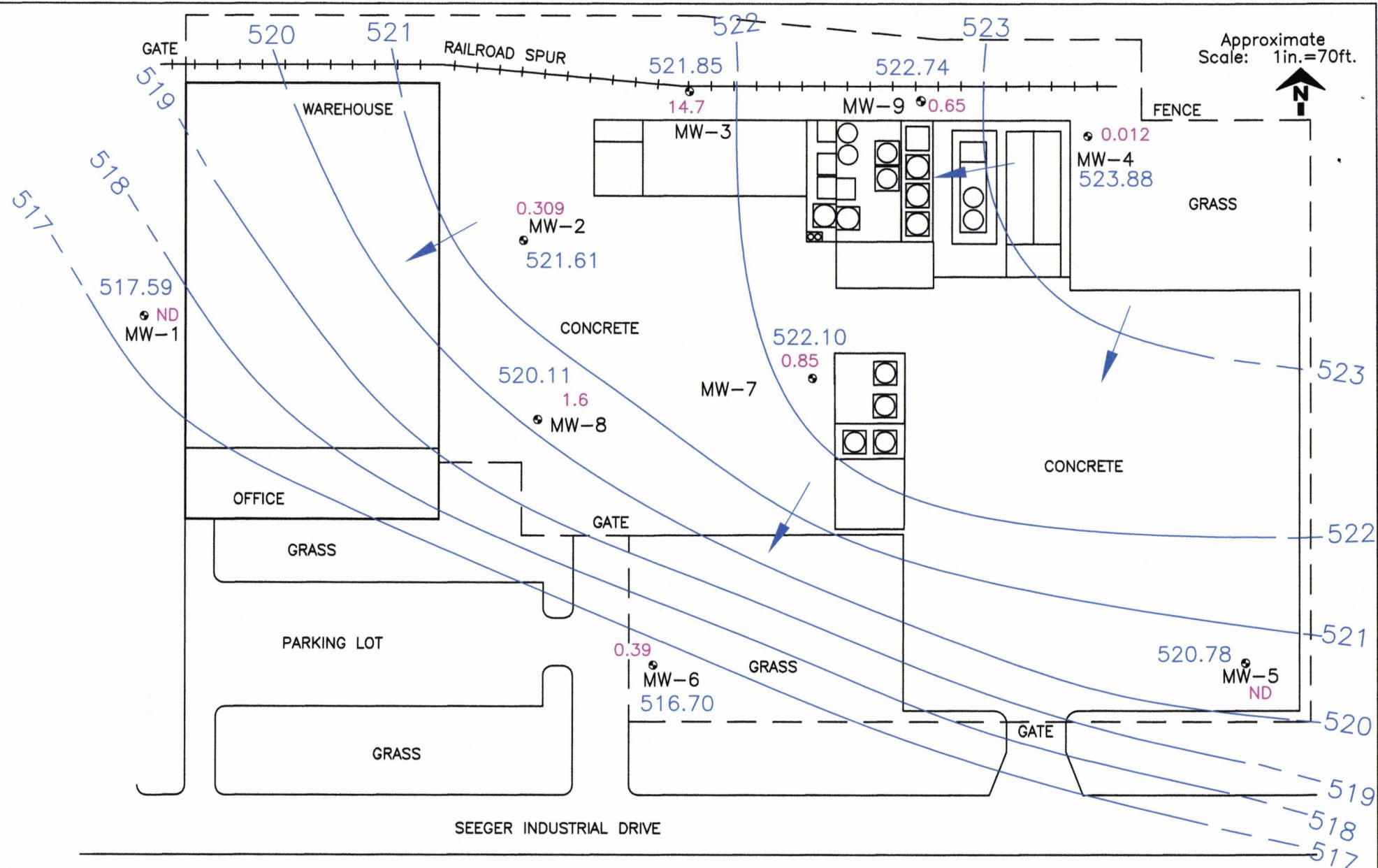
Thomas C. Sullivan, P.G.  
Principal Scientist/Project Manager

Attachments (1 copy of Attachments 1 & 2 provided to MDNR)

cc: Tony Pirelli, Univar USA Inc. (w/o Attachments 1 & 2)  
Christine Jump, US EPA Region 7 (w/o Attachments 1 & 2)

**TABLE 1**  
**Water Level Elevations - 2012**  
**Univar USA Inc., Berkeley, MO**

Monitoring Well	TOC Elevation	June 21, 2012		December 20, 2012	
		Depth to Water	Water Level Elevation	Depth to Water	Water Level Elevation
MW-1	521.82	4.23	517.59	3.04	518.78
MW-2	523.92	2.31	521.61	1.76	522.16
MW-3	523.88	2.03	521.85	1.10	522.78
MW-4	528.64	4.76	523.88	4.19	524.45
MW-5	530.34	9.56	520.78	8.56	521.78
MW-6	527.56	10.86	516.70	10.24	517.32
MW-7	527.71	5.61	522.10	5.03	522.68
MW-8	523.92	3.81	520.11	3.47	520.45
MW-9	523.94	1.20	522.74	0.16	523.78



#### LEGEND

- 522.92 MONITORING WELL WITH GROUNDWATER ELEVATION (6/21/12)
- 522 CONTOUR OF APPROXIMATE EQUAL WATER LEVEL
- DIRECTION OF GROUNDWATER FLOW
- 0.31 GROUNDWATER SAMPLE TOTAL VOC CONCENTRATION (mg/L; on 6/21/12; ND=none detected)



**UNIVAR USA INC.  
BERKELEY, MISSOURI**

**WATER TABLE MAP AND  
ANALYTICAL RESULTS (6-21-12)**

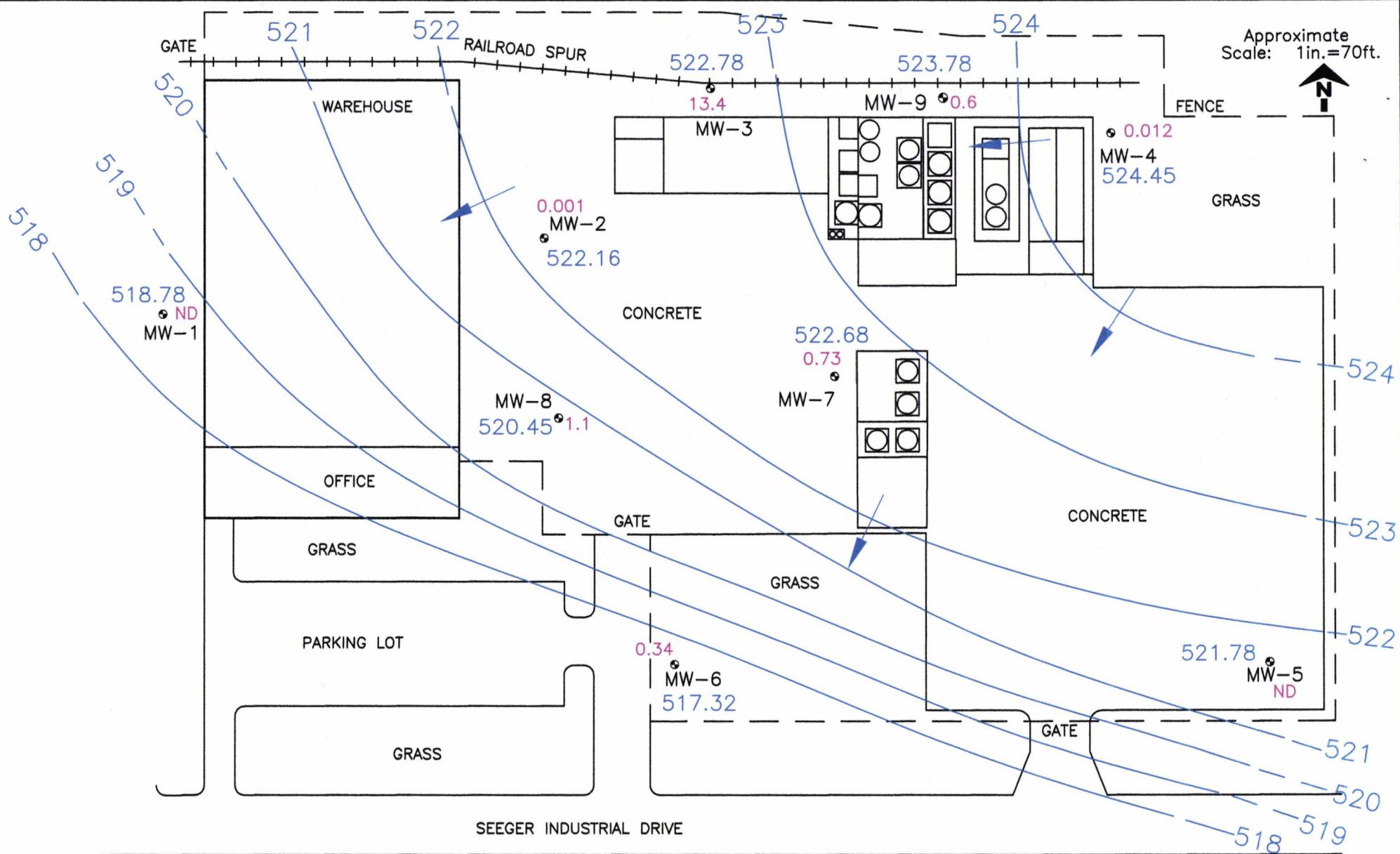
CHECKED T.SULLIVAN

FILENAME:  
wtc 6-21-12 w/VOC

DATE 7-9-12

FIGURE 1

Approximate  
Scale: 1in.=70ft.



LEGEND

- MONITORING WELL WITH GROUNDWATER ELEVATION (12/20/12)
- CONTOUR OF APPROXIMATE EQUAL WATER LEVEL
- DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER SAMPLE TOTAL VOC CONCENTRATION (mg/L; on 12/20/12; ND=none detected)



UNIVAR USA INC.  
BERKELEY, MISSOURI

WATER TABLE MAP AND  
ANALYTICAL RESULTS (12-20-12)

CHECKED T.SULLIVAN

FILENAME: wtc 12-20-12 w/VOC

DATE 2-19-13

FIGURE 2

**TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.**

<sup>1</sup>. Tier 1 RBTLs for indoor inhalation of vapor emissions, non-residential land use, soil type 2. <sup>2</sup>. Tier 1 RBTLs for dermal contact, non-residential land use, soil type 2.

1. HFR-TRB-10: Indoor infiltration of vapor emissions, non-residential land use, soft type 2; 2. HFR-TRB-11 for dermal contact;
3. US EPA Vapor Intrusion screening values following US EPA and ITRC Guidance utilizing RSLs for industrial air (See CMS).

4. US EPA Johnson & Ettinger Model Values, see CMS for detail. Values for 10-6 (10-5)

All concentrations in milligrams per liter ( $\text{mg/L}$ ) or parts per million ( $\text{ppm}$ ). ND = none detected; NA = not analyzed; NE = none established; < = not detected at laboratory detection limit shown. All concentrations shown in bold.

TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.

	Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	MW-2														
					3/9/2007	6/25/2007	10/15/2007	5/7/2008	9/22/2008	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	12/21/2011 dup	6/21/2012	12/20/2012
Acetone	492,000	36,900	96,400	4010 (4010)	<0.025	<0.05	<0.025	<0.01	<b>0.018</b>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzene	9	1.06	0.007	0.171 (1.71)	<0.005	<0.01	<0.005	<0.001	<b>0.0017</b>	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromobenzene	NE	NE	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromochloromethane	447	270	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromodichloromethane	12	1.17	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromomethane	8.78	8.98	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.025	<0.05	<0.025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
n-Butylbenzene	119	3	NE	NE	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
sec-Butylbenzene	84	4	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
tert-Butylbenzene	128	4	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Carbon tetrachloride	0.670	0.171	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chlorobenzene	178	11.9	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloroform	2.57	2.11	0.0035	0.082 (0.62)	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloromethane	5	14.4	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
2-Chlorotoluene	244	7.64	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
4-Chlorotoluene	0.95	6.49	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromo-3-chloropropan	1410	0.0359	ND	ND	<0.005	<0.05	<0.025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromoethane	NE	NE	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Dibromomethane	NE	NE	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.0169	<b>0.0065</b>	<b>0.0036</b>	0.0206	<b>0.0021</b>	0.053	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Dichlorodifluoromethane	21.4	350	ND	ND	<0.005	<0.01	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<b>0.035</b>	<b>0.038</b>	<b>0.049</b>	<b>0.0213</b>	<b>0.043</b>	<b>0.0123</b>	<b>0.0028</b>	<b>0.0014</b>	<b>0.005</b>	<0.001	<b>0.0137</b>	<0.001	<0.001	<b>0.0134</b>	<0.001
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<b>0.23</b>	<b>0.26</b>	<b>0.27</b>	<b>0.0719</b>	<b>0.23</b>	<b>0.0169</b>	<b>0.0065</b>	<b>0.0036</b>	0.0206	<b>0.0021</b>	0.053	<0.001	<0.001	<b>0.0344</b>	<0.001
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<b>0.014</b>	<b>0.026</b>	<b>0.032</b>	<b>0.0148</b>	<b>0.036</b>	<b>0.0086</b>	<b>0.0018</b>	<0.001	0.034	<0.001	<b>0.0093</b>	<0.001	<0.001	<b>0.0075</b>	<0.001
cis-1,2-Dichloroethene	93.6	23.4	NE	21.5 (21.5)	<b>0.23</b>	<b>0.2</b>													

**TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.**

Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	MW-3															
				3/9/2007	3/9/2007 Dup	6/25/2007	10/15/2007	5/7/2008	9/22/2008	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012	12/20/2012	
Acetone	492,000	36,900	96,400	4010 (4010)	<0.25	<0.1	<0.5	<0.25	<0.1	0.017	<1	<b>0.16</b>	<1	<1	<1	<0.5	<1	<1	
Benzene	9	1.06	0.007	0.171 (1.71)	<0.05	<0.02	<0.1	<0.05	<0.01	<b>0.0012</b>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Bromobenzene	NE	NE	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Bromochloromethane	447	270	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	
Bromodichloromethane	12	1.17	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	
Bromomethane	8.78	8.98	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.5	
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.25	<0.02	<0.5	<0.25	<0.1	<0.01	<1	<b>0.0809</b>	<1	<1	<0.5	<1	<1	<1	
n-Butylbenzene	119	3	NE	NE	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<b>0.0146</b>	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
sec-Butylbenzene	84	4	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
tert-Butylbenzene	128	4	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	NA	NA	<0.05	<0.005	<0.5	<b>&lt;0.5</b>	<0.5	<0.5	<0.25	<0.5	<0.5	<0.5	
Carbon tetrachloride	0.670	0.171	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
Chlorobenzene	178	11.9	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<0.05	<0.02	<0.1	<0.05	<b>0.0305</b>	0.035	<b>0.0463</b>	<b>0.0626</b>	<b>0.0408</b>	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1
Chloromethane	5	14.4	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
2-Chlorotoluene	244	7.64	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
4-Chlorotoluene	0.95	6.49	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
1,2-Dibchloro-3-chloropropane	1410	0.0359	ND	ND	<0.05	<0.02	<0.5	<0.25	<0.025	<0.25	<0.25	<0.25	<0.25	<0.25	<0.125	<0.25	<0.25	<0.25	
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	NA	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
1,2-Dibromoethane	NE	NE	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
Dibromomethane	NE	NE	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
Dichlorodifluoromethane	21.4	350	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<b>0.2</b>	<b>0.21</b>	<b>0.28</b>	<b>0.32</b>	<b>0.33</b>	<b>0.33</b>	<b>0.348</b>	<b>0.274</b>	<b>0.294</b>	<b>0.181</b>	<b>0.257</b>	<b>0.236</b>	<b>0.225</b>	<b>0.206</b>	
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<b>2.7</b>	<b>2.9</b>	<b>3.3</b>	<b>3.2</b>	<b>2.28</b>	<b>2.9</b>	<b>2.7</b>	<b>2.62</b>	<b>1.99</b>	<b>2.25</b>	<b>1.57</b>	<b>1.91</b>	<b>1.6</b>	<b>1.6</b>	<b>1.38</b>
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<b>0.11</b>	<b>0.12</b>	<b>0.34</b>	<b>0.33</b>	<b>0.295</b>	<b>0.45</b>	<b>0.373</b>	<b>0.382</b>	<b>0.27</b>	<b>0.321</b>	<b>0.207</b>	<b>0.274</b>	<b>0.226</b>	<b>0.246</b>	<b>0.188</b>
cis-1,2-Dichloroethene	93.6	23.4	NE	21.5 (21.5)	<b>0.45</b>	<b>0.46</b>	<b>0.61</b>	<b>0.88</b>	<b>0.921</b>	<b>1.5</b>	<b>1.76</b>	<b>1.61</b>	<b>2.83</b>	<b>2.88</b>	<b>2.79</b>	<b>3.44</b>	<b>4.15</b>	<b>3.23</b>	<b>5.28</b>
trans-1,2-Dichloroethene	86.8	34	1.53	30 (30)	<0.05	<0.02	<0.1	<0.05	<b>0.0123</b>	<b>0.057</b>	<0.1	<b>0.0115</b>	<b>0.0241</b>	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1
1,2-Dichloropropane	9.97	1.65	ND	ND	<0.05	<0.02	<0.1	<0.05	<0.01	<0.001	<0.1	<0.1	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1</td	

TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.

	Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	MW-4													
					3/9/2007	6/25/2007	10/15/2007	5/7/2008	9/22/2008	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012	12/20/2012
Acetone	492,000	36,900	96,400	4010 (4010)	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzene	9	1.06	0.007	0.171 (1.71)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromobenzene	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromoform	447	270	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromochloromethane	12	1.17	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromomethane	8.78	8.98	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	
n-Butylbenzene	119	3	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
sec-Butylbenzene	84	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
tert-Butylbenzene	128	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Carbon tetrachloride	0.670	0.171	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chlorobenzene	178	11.9	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloromethane	5	14.4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
2-Chlorotoluene	244	7.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
4-Chlorotoluene	0.95	6.49	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromo-3-chloropropane	1410	0.0359	ND	ND	<0.001	<0.005	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromoethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Dibromomethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Dichlorodifluoromethane	21.4	350	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
cis-1,2-Dichloroethene	93.6	23.4	NE	21.5 (21.5)	<b>0.0028</b>	<b>0.0014</b>	<b>0.0083</b>	<b>0.0032</b>	<b>0.006</b>	<b>0.0016</b>	<b>0.0014</b>	<b>0.0021</b>	<b>0.0035</b>	<b>0.0031</b>	<b>0.001</b>	<b>0.0021</b>	<b>0.0014</b>	<b>0.0016</b>
trans-1,2-Dichloroethene	86.8	34	1.53	30 (30)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dichloropropane	9.97	1.65	ND	ND	<0.001	<0.001	<0.001	<0.001	<									

**TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.**

	Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	3/9/2007	6/25/2007	10/15/2007	5/7/2008	9/22/2008	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012	12/20/2012
MW-5																		
Acetone	492,000	36,900	96,400	4010 (4010)	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzene	9	1.06	0.007	0.171 (1.71)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromobenzene	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromoform	447	270	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromochloromethane	12	1.17	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromodichloromethane	2,420	11	0.5	2.12 (21.2)	<0.001	<0.001	<0.001	<0.001	0.0044	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromomethane	8.78	8.98	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
n-Butylbenzene	119	3	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
sec-Butylbenzene	84	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
tert-Butylbenzene	128	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	NA	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
Carbon tetrachloride	0.670	0.171	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chlorobenzene	178	11.9	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloromethane	5	14.4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
2-Chlorotoluene	244	7.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
4-Chlorotoluene	0.95	6.49	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromo-3-chloropropan	1410	0.0359	ND	ND	<0.001	<0.005	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromoethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Dibromomethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Dichlorodifluoromethane	21.4	350	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
cis-1,2-Dichloroethene	93.6	23.4	NE	21.5 (21.5)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
trans-1,2-Dichloroethene	86.8	34	1.53	30 (30)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dichloropropane	9.97	1.65	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,3-Dichloropropane	NA	NA	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
2,2-Dichloropropane	NA	NA	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloropropene	NA	NA	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
cis-1,3-Dichloropropene	5.29	1.09	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
trans-1,3-Dichloropropene	5.29	1.09	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,4-Dioxane	2,390	144	8	NE	NA	NA	NA	<0.1	<0.039	<0.0035	<0.004	<0.004	<0.1	<0.1	<0.1	<0.1	<0.1	
Ethylbenzene	1,430	35.1	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Hexachlorobutadiene	1.9	0.0262	0.001	0.096 (0.966)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
2-Hexanone	527	254	ND	ND	NA	NA	NA	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Isopropylbenzene	52.7	25	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
p-Isopropyltoluene	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
4-Methyl-2-pentanone	220,000	518	ND	ND	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Methyl-tert-butyl-ether	1,760	85.8	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Methylene chloride	214	20.2	0.2	3.19 (31.9)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Naphthalene	22	0.0751	ND	ND	<0.005</													

1. Tier 1 BRTLs for indoor inhalation of vapor emissions, non-residential land use, soil type 2. 2. Tier 1 BRTLs for dermal contact, non-residential land use, soil type 2.

<sup>1</sup> Tier 1 RBTLS for indoor inhalation of vapor emissions, non-residential land use, soil type 2, 2. Tier 1 RBTLS for dermal contact.

3. US EPA Vapor Intrusion screening values following US EPA and ITRC Guidance utilizing  
4. US EPA Johnson & Ettinger Model Values, see CMS for detail. Values for 10.6 (10.5)

All concentrations in  $\mu\text{g/m}^3$  unless otherwise indicated. ND = none detected; NA = not analyzed; NE = not established; n = number of data points used to calculate the arithmetic mean. All concentrations are converted to  $\mu\text{g/m}^3$ .

TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.

	Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	MW-6															
					3/9/2007	6/25/2007	6/25/2007 Dup	10/15/2007	5/7/2008	9/22/2008	1/26/2009	1/26/2009 dup	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012	12/20/2012
Acetone	492,000	36,900	96,400	4010 (4010)	<0.25	<0.005	<0.005	<0.05	<0.01	<0.1	<0.1	<0.1	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzene	9	1.06	0.007	0.171 (1.71)	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromobenzene	NE	NE	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromochloromethane	447	270	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromodichloromethane	12	1.17	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromomethane	8.78	8.98	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.25	<0.005	<0.005	<0.05	<0.01	<0.1	<b>0.0093</b>	<b>0.0095</b>	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	
n-Butylbenzene	119	3	NE	NE	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
sec-Butylbenzene	84	4	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
tert-Butylbenzene	128	4	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	NA	NA	<0.001	<0.05	<0.05	<0.005	<0.005	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	
Carbon tetrachloride	0.670	0.171	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Chlorobenzene	178	11.9	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.05	<0.001	<0.001	<0.01	<b>0.0058</b>	<0.01	<b>0.0085</b>	<b>0.0081</b>	<b>0.0411</b>	<b>0.0325</b>	<b>0.131</b>	<b>0.108</b>	<b>0.121</b>	<b>0.127</b>	<b>0.172</b>	<b>0.173</b>
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Chloromethane	5	14.4	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
2-Chlorotoluene	244	7.64	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
4-Chlorotoluene	0.95	6.49	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromo-3-chloropropan	1410	0.0359	ND	ND	<0.05	<0.005	<0.005	<0.05	<0.0025	<0.025	<0.025	<0.0025	<0.0125	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	NA	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dibromoethane	NE	NE	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Dibromomethane	NE	NE	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
Dichlorodifluoromethane	21.4	350	ND	ND	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<b>0.57</b>	<b>0.13</b>	<b>0.12</b>	<b>1.3</b>	<b>0.688</b>	<b>0.745</b>	<b>0.361</b>	<b>0.399</b>	<b>0.138</b>	<b>0.208</b>	<b>0.0484</b>	<b>0.0496</b>	<b>0.118</b>	<b>0.0446</b>	<b>0.0953</b>	<b>0.0385</b>
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<0.05	<0.001	<0.001	<0.01	<0.001	<0.01	<0.01	<0.01	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<b>0.087</b>															

TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.

	Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	MW-7																
					3/9/2007	6/25/2007	10/15/2007	10/15/2007 Dup	5/7/2008	5/7/2008 Dup	9/22/2008	9/22/2008 Dup	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012	12/20/2012
Acetone	492,000	36,900	96,400	4010 (4010)	<12	<1.2	0.16	0.11	<0.01	0.017	0.021	<0.05	1.31	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
Benzene	9	1.06	0.007	0.171 (1.71)	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Bromobenzene	NE	NE	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Bromochloromethane	447	270	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Bromodichloromethane	12	1.17	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Bromoform	2,420	11	0.5	2.12 (21.2)	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Bromomethane	8.78	8.98	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.01	
2-Butanone	740,000	12,600	9,520	6960 (6960)	<12	<1.2	<0.12	<0.1	<0.01	<0.01	<0.01	<0.05	0.129	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02
n-Butylbenzene	119	3	NE	NE	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
sec-Butylbenzene	84	4	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
tert-Butylbenzene	128	4	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	NA	NA	<0.001	<0.001	<0.005	<0.005	<0.025	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	
Carbon tetrachloride	0.670	0.171	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Chlorobenzene	178	11.9	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	0.0128	<0.001	<0.001	<0.001	<0.002	
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<2.5	<0.25	0.046	0.048	0.0023	0.0022	<0.001	<0.001	0.0644	0.069	0.0162	0.0087	<0.001	0.0058	0.013	0.0042	<0.002
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Chloromethane	5	14.4	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
2-Chlorotoluene	244	7.64	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
4-Chlorotoluene	0.95	6.49	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
1,2-Dibromo-3-chloropropan	1410	0.0359	ND	ND	<2.5	<1.2	<0.25	<0.02	<0.0025	<0.0025	<0.0025	<0.0125	<0.0125	<0.0025	0.008	<0.0025	<0.0025	<0.0025	<0.005		
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	NA	NA	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
1,2-Dibromoethane	NE	NE	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Dibromomethane	NE	NE	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
1,2-Dichlorobenzene	12,000	292	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
1,3-Dichlorobenzene	633	6.87	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
Dichlorodifluoromethane	21.4	350	ND	ND	<2.5	<0.25	<0.25	<0.02	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	31	0.96	1	0.9	0.203	0.206	0.14	0.15	0.116	0.144	0.0661	0.132	0.0604	0.121	0.066	0.273	0.178
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<2.5	<0.25	<0.2														

**TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.**

Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	MW-8														
				3/9/2007	6/25/2007	10/15/2007	5/7/2008	9/22/2008	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012	12/20/2012	
Acetone	492,000	36,900	96,400	4010 (4010)	<0.25	<0.12	<0.025	<0.01	<b>0.019</b>	<0.1	<b>0.0271</b>	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzene	9	1.06	0.007	0.171 (1.71)	<0.05	<0.025	<0.005	<b>0.0033</b>	<b>0.0053</b>	<b>0.0036</b>	<b>0.0044</b>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromobenzene	NE	NE	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromochloromethane	447	270	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromodichloromethane	12	1.17	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Bromomethane	8.78	8.98	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.25	<0.12	<0.025	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
n-Butylbenzene	119	3	NE	NE	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
sec-Butylbenzene	84	4	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
tert-Butylbenzene	128	4	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	<0.001	<0.005	<0.005	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Carbon tetrachloride	0.670	0.171	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Chlorobenzene	178	11.9	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<0.05	<0.025	<0.005	<0.001	<0.001	<b>0.0015</b>	<b>0.0023</b>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Chloromethane	5	14.4	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
2-Chlorotoluene	244	7.64	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
4-Chlorotoluene	0.95	6.49	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1,2-Dibromo-3-chloropropan	1410	0.0359	ND	ND	<0.05	<0.12	<0.025	<0.0025	<0.0025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1,2-Dibromoethane	NE	NE	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Dibromomethane	NE	NE	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Dichlorodifluoromethane	21.4	350	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<b>0.13</b>	<b>0.13</b>	0.17	<b>0.147</b>	<b>0.17</b>	<b>0.134</b>	<b>0.15</b>	<b>0.134</b>	<b>0.143</b>	<b>0.091</b>	<b>0.126</b>	<b>0.0829</b>	<b>0.0997</b>	<b>0.0644</b>
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<b>0.28</b>	<b>0.25</b>	0.26	<b>0.186</b>	<b>0.26</b>	<b>0.221</b>	<b>0.247</b>	<b>0.233</b>	<b>0.219</b>	<b>0.128</b>	<b>0.155</b>	<b>0.0924</b>	<b>0.113</b>	<b>0.0667</b>
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	0.1	0.16	0.17	<b>0.162</b>	<b>0.24</b>	<b>0.138</b>	<b>0.167</b>	<b>0.132</b>	<b>0.134</b>	<b>0.0725</b>	<b>0.119</b>	<b>0.0532</b>	<b>0.0621</b>	<b>0.0382</b>
cis-1,2-Dichloroethene	93.6	23.4	NE	21.5 (21.5)	<b>0.25</b>	<b>0.3</b>	0.72	<b>0.591</b>	1.3	<b>0.856</b>	<b>1.14</b>	<b>0.96</b>	<b>1.19</b>	<b>0.761</b>	<b>1.04</b>	<b>0.653</b>	<b>0.925</b>	<b>0.688</b>
trans-1,2-Dichloroethene	86.8	34	1.53	30 (30)	<0.05	<0.025	<0.005	<b>0.0134</b>	<b>0.02</b>	<b>0.0038</b>	<b>0.0035</b>	<b>0.0035</b>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichloropropane	9.97	1.65	ND	ND	<0.05	<0.025	<0.005	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
1,3-Dichloropropane	NA	NA	ND	ND	<0.05	<0.025												

TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.

Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	MW-9																	
				9/23/2008	1/26/2009	5/7/2009	5/7/2009 Dup	12/1/2009	12/1/2009 Dup	5/26/2010	5/26/2010 Dup	12/14/2010	12/14/2010 dup	5/17/2011	5/17/2011 dup	12/21/2011	6/21/2012	6/21/2012 dup	12/20/2012	12/20/2012 dup	
Acetone	492,000	36,900	96,400	4010 (4010)	<b>0.411</b>	<b>0.214</b>	<b>0.0567</b>	<b>0.12</b>	<0.1	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.05	<b>0.0134</b>	<0.05	<0.05		
Benzene	9	1.06	0.007	0.171 (1.71)	<0.01	<0.01	<b>0.0017</b>	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Bromobenzene	NE	NE	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Bromochloromethane	447	270	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Bromodichloromethane	12	1.17	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Bromomethane	8.78	8.98	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.025	<0.005	<0.025	<0.025		
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.1	<b>0.0116</b>	<0.1	<0.01	<b>0.144</b>	<0.1	<0.05	<0.1	<0.1	<0.1	<0.05	<0.05	<0.01	<0.05	<0.05		
n-Butylbenzene	119	3	NE	NE	<0.01	<0.01	<0.01	<0.001	<0.01	<b>0.0011</b>	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005	
sec-Butylbenzene	84	4	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
tert-Butylbenzene	128	4	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Carbon disulfide	189	115	5.25	106 (106)	<0.05	<0.05	<0.05	<0.005	<0.05	<b>0.006</b>	<0.05	<0.025	<0.05	<0.05	<0.05	<0.025	<0.025	<0.005	<0.025	<0.025	
Carbon tetrachloride	0.670	0.171	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Chlorobenzene	178	11.9	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<b>0.0123</b>	<b>0.0152</b>	<b>0.0068</b>	<0.01	<b>0.0028</b>	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<b>0.0028</b>	<0.005	<0.005		
Chloromethane	5	14.4	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
2-Chlorotoluene	244	7.64	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
4-Chlorotoluene	0.95	6.49	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
1,2-Dibchloro-3-chloropropane	1410	0.0359	ND	ND	<0.025	<0.025	<0.025	<0.0025	<0.025	<0.025	<0.0125	<0.025	<0.025	<0.0125	<0.0125	<0.0025	<0.0125	<0.0125	<0.0125		
Dibromochloromethane	51.4	0.932	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
1,2-Dibromoethane	NE	NE	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Dibromomethane	NE	NE	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
Dichlorodifluoromethane	21.4	350	ND	ND	<0.01	<0.01	<0.01	<0.001	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<b>0.0367</b>	<b>0.095</b>	<b>0.135</b>	<b>0.158</b>	<b>0.132</b>	<b>0.121</b>	<b>0.139</b>	<b>0.143</b>	<b>0.106</b>	<b>0.0974</b>	<b>0.106</b>	<b>0.107</b>	<b>0.0882</b>	<b>0.0986</b>	<b>0.103</b>	<b>0.0906</b>	<b>0.0471</b>
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<0.01	<0.01	<b>0.0011</b>	<0.01	<b>0.001</b>	<0.01	<0.05	<0.01	<0.01	<0.01	<0.05	<0.005	<0.001	<0.005	<0.005		
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<0.01	<b>0.0047</b>	<b>0.0057</b>	<b>0.</b>													

**TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.**

	Tier 1 RBTL Vapor <sup>1</sup>	Tier 1 RBTL Dermal <sup>2</sup>	EPA RSL Vapor <sup>3</sup>	EPA J & E Model <sup>4</sup>	3/9/2007	6/25/2007	10/15/2007	5/7/2008	9/22/2008	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012	12/20/2012
Acetone	492,000	36,900	96,400	4010 (4010)	<0.005	<0.005	<0.005	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Benzene	9	1.06	0.007	0.171 (1.71)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromobenzene	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromochloromethane	447	270	ND	ND	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromodichloromethane	12	1.17	ND	ND	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bromomethane	8.78	8.98	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.005	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
n-Butylbenzene	119	3	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
sec-Butylbenzene	84	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
tert-Butylbenzene	128	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	NA	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbon tetrachloride	0.670	0.171	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorobenzene	178	11.9	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<0.001	0.0064	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloromethane	5	14.4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2-Chlorotoluene	244	7.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4-Chlorotoluene	0.95	6.49	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromo-3-chloropropan	1410	0.0359	ND	ND	<0.001	<0.005	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromoethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dibromomethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dichlorodifluoromethane	21.4	350	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,2-Dichloroethene	93.6	23.4	NE	21.5 (21.5)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,2-Dichloroethene	86.8	34	1.53	30 (30)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloropropane	9.97	1.65	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-Dichloropropane	NA	NA	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2,2-Dichloropropane	NA	NA	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloropropene	NA	NA	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,3-Dichloropropene	5.29	1.09	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,3-Dichloropropene	5.29	1.09	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dioxane	2,390	144	8	NE	NA	NA	NA	NA	0.14	<0.0032	<0.0032	<0.0033	<0.0033	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	1,430	35.1	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Hexachlorobutadiene	1.9	0.0262	0.0001	0.096 (0.966)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2-Hexanone	527	254	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Isopropylbenzene	52.7	25	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
p-Isopropyltoluene	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4-Methyl-2-pentanone	220,000	518	ND	ND	<0.005	<0.005	<0.005	<0.005	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methyl-tert-butyl-ether	1,760	85.8	ND	ND	<0.001	<0.001	<0.001	<0.001	&lt									

1. Tier 1 RBTI's for indoor inhalation of vapor emissions, non-residential land use, soil type 2. 2. Tier 1 RBTI's for dermal contact, non-residential land use, soil type 2.

1. Tier 1 RBTIs for indoor inhalation of vapor emissions, non-residential land use, soil type z-2. 2. Tier 1 RBTIs for dermal contact.

US EPA Vapor Intrusion screening values following US EPA and ITRC Guidance utilizing RSLs for industrial air (See CMS).

4. US EPA Johnson & Ettinger Model Values, see CMS for detail. Values for 10.6 (10.5)

All concentrations in milligrams per liter (mg/L) or parts per billion (ppb). ND = none detected; NA = not analyzed; NE = none established; -- = not detected at laboratory detection limit shown. All concentrations shown in bold.

TABLE 2. Summary of Groundwater Sample VOC Analytical Results, Univar USA Inc., Berkeley, Missouri.

	Tier 1 RBTL	Tier 1 RBTL	EPA	EPA J & E	Trip Blank												
	Vapor <sup>1</sup>	Dermal <sup>2</sup>	RSL Vapor <sup>3</sup>	Model <sup>4</sup>	3/9/2007	6/25/2007	10/15/2007	5/7/2008	9/23/2008	1/26/2009	5/7/2009	12/1/2009	5/26/2010	12/14/2010	5/17/2011	12/21/2011	6/21/2012
Acetone	492,000	36,900	96,400	4010 (4010)	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzene	9	1.06	0.007	0.171 (1.71)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromobenzene	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromochloromethane	447	270	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromodichloromethane	12	1.17	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromoform	2,420	11	0.5	2.12 (21.2)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bromomethane	8.78	8.98	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005
2-Butanone	740,000	12,600	9,520	6960 (6960)	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
n-Butylbenzene	119	3	NE	NE	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
sec-Butylbenzene	84	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
tert-Butylbenzene	128	4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Carbon disulfide	189	115	5.25	106 (106)	NA	NA	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Carbon tetrachloride	0.670	0.171	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chlorobenzene	178	11.9	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroethane	25.7	33.1	97.8	0.838 (8.38)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloroform	2.57	2.11	0.0035	0.062 (0.62)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chloromethane	5	14.4	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2-Chlorotoluene	244	7.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
4-Chlorotoluene	0.95	6.49	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromo-3-chloropropan	1410	0.0359	ND	ND	<0.001	<0.005	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025
Dibromochloromethane	51.4	0.932	ND	ND	NA	NA	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dibromoethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dibromomethane	NE	NE	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichlorobenzene	12,000	292	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-Dichlorobenzene	633	6.87	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,4-Dichlorobenzene	21.2	1.64	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dichlorodifluoromethane	21.4	350	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethane	34.2	12.9	0.0335	285 (285)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloroethane	8.28	1.29	0.01	0.078 (0.788)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethene	72.3	74.4	0.203	37.6 (37.6)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
cis-1,2-Dichloroethene	93.6	23.4	NE	21.5 (21.5)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
trans-1,2-Dichloroethene	86.8	34	1.53	30 (30)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloropropane	9.97	1.65	ND	ND	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,3-Dichloropropane	NA	NA</															